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EXAMINER

TON, ANTHONY T

ART UNIT PAPER NUMBER

2661

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Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/812,210

Applicant(s)

PITCHER ET AL.

Examiner

Anthony T Ton

Art Unit

2661

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 19 March 2001.
2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-37 is/are pending in the application.
4a) Of the above claim(s) _____ is/are withdrawn from consideration.
5) ☒ Claim(s) 34-37 is/are allowed.
6) ☒ Claim(s) 1-10 and 12-33 is/are rejected.
7) ☒ Claim(s) 11 is/are objected to.
8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
10) ☒ The drawing(s) filed on 19 March 2001 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date 4 and 5.

- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Specification

1. The disclosure is objected to because of the following informalities:

a) Term “a **cal** between” in page 4 line 13 is improper since it is misspelling.

Examiner suggests changing this term to “a **call** between”.

b) Missing two sub-titles: “**1. Field of the Invention**” and “**2. Description of the Related Art**” in page 1 after line 2 and line 5, respectively.

Examiner suggests adding the “**1. Field of the Invention**” after line 2 “BACKGROUND OF THE INVENTION” and the “**2. Description of the Related Art**” after line 5 “channels in such systems.”.

Appropriate correction is required.

Claim Objections

2. **Claim 17** is objected to because of the following informalities:

Term “said cells **each have**” in line 2 is improper since the verb “have” does not comply with subject “each” .

Examiner suggests changing this term to either “said cells **each has**” or “said cells **each having**”.

Appropriate correction is required.

Claim Rejections - 35 USC § 112

3. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter, which the applicant regards as his invention.

4. **Claims 31-33** are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 31 recites the limitations "**the base station**" and "**the cell**" in line 13; and the limitation "**the mobile terminal**" in line 14. There are insufficient antecedent bases for these limitations in the claim.

Claim Rejections - 35 USC § 102

5. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

6. **Claims 1-6, 8, 9 and 22-30** are rejected under 35 U.S.C. 102(e) as being anticipated by **Gorman et al.** (US Patent No. 6,711,417) hereinafter referred to as **Gorman**.

a) **In Regarding to Claim 1: Gorman disclosed** a local site communication system providing wireless communication with a mobile terminal in a local site and cooperating with a public communication system including a public service telephone network (*see Fig.1*) and a cellular communication network having a plurality of radio base stations covering a plurality of cells (*see Fig.1: 132, and col.4 lines 27-34*) where switching of mobile terminal communication links with said public communication system is controlled by a mobile switching center (*see Fig.4*), said local site communication system comprising:

a broadband connection between said local site and an internet (*see Fig.1: ISH 108, 102 and 110*);

a wireless local site network (*see Fig.3: 318; herein the 318 is also considered as a wireless local site network since it is an integrated service hub "ISH" and it provides a wireless connection to the mobile device 300 as shown in Fig.3*) in said local site and communicating data between said broadband connection and said mobile terminal when said mobile terminal is located in said local site (*see Fig.1: 100 and Fig.3: 300*); and

a cyber base station connected to the internet and communicating data between said broadband connection and said mobile switching center whereby said mobile terminal when located at said local site connects to said public communication system via said wireless local site network, said broadband connection, the internet and said cyber base station (*see Fig.4: 400 (the 400 is a service manager but it is considered as a cyber base station since its function like such a cyber base station), broadband network 418 (Internet), MSC 412, PSTN 426*).

b) In Regarding to Claim 2: Gorman further disclosed the local site communication system of claim 1, further comprising a voice client converting data between wireless signals on said wireless local site network and internet protocol signals on said broadband connection (*see col.3 line 59 – col.4 line 4*).

c) In Regarding to Claim 3: Gorman further disclosed the local site communication system of claim 2, wherein said voice client adds internet protocol overhead to data received from said mobile terminal and to be sent from said wireless local site network to said cyber base station (*see col.3 line 66 – col.4 line 4*), and removes internet protocol overhead from data received from said cyber base station (*see Fig.3 and col.5 lines 64-67*).

d) **In Regarding to Claim 4: Gorman disclosed** all aspects of this claim as set forth in claims 1 and 2, but fails to explicitly disclose wherein said data communicated by said cyber base station includes a neighbor cell list for said local site communication system.

However, **Gorman** inherently Gorman discloses such a neighbor cell list of the instant claim because Gorman discloses hand-off processes between a service manager (*cyber base station*) and a MSC as shown in Figs.6 and 7, wherein it is inherently such a service manager having a list of pico cells such as cells 605 and 705 shown in Figs. 6 and 7, and cell 102 as shown in Fig.1.

e) **In Regarding to Claim 5: Gorman further disclosed** the local site communication system of claim 1, wherein said cyber base station communicates information on a control channel (*see Fig.4: 400 (cyber base station) and 402 (control channel)*), and said control channel information includes internet protocol addresses (*see col.8 lines 50-67*).

f) **In Regarding to Claim 6: Gorman further disclosed** the local site communication system of claim 1, wherein said cyber base station mimics a radio base station to said mobile switching center (*see abstract and Fig.7: service manager (cyber base station) ISH (considered as a radio base station) and MSC (mobile switching center)*).

g) **In Regarding to Claim 8: Gorman further disclosed** the local site communication system of claim 1, wherein

said local site communication system provides wireless communication with mobile terminals in a plurality of local sites (*see Fig.1: 108 and 111*) each having

a broadband connection to the internet (*see Fig.1: 108 (broadband) connected to packet network 110 (Internet)*), and

a wireless local site network communicating data between said broadband connection and a selected mobile terminal when said selected mobile terminal is located at said local site (*see Figs.2 and 3*); and
said cyber base station communicates data between said broadband connections and said mobile switching center (*see Fig.4: 400, 414, 418 and 412*).

h) In Regarding to Claim 9: Gorman further disclosed the local site communication system of claim 8, wherein said cyber base station mimics a radio base station to said mobile switching center (*see abstract and Fig.7: service manager (cyber base station) ISH (considered as a radio base station) and MSC (mobile switching center)*)).

i) In Regarding to Claim 22: Gorman disclosed a wireless local site network providing wireless communication with a selected mobile terminal in a local site having a broadband connection to an Internet (*see Fig.1: 102 and Fig.2: 206*) and cooperating with a communication network having a plurality of base stations covering a plurality of cells (*see Fig.1: 132, and col.4 lines 27-34*) where switching of mobile terminal communication links with said communication network is controlled by a mobile switching center and further cooperating with a cyber base station connected to the Internet and also controlled by the mobile switching center (*see Fig.4*), said wireless local site network comprising:

an interface to the Internet for communicating between said wireless local site network and said cyber base station (*see Fig.1: 102*);

a transceiver for communicating with a mobile terminal when a mobile terminal is located at said local site (*see Fig.3: 318 and 306*); and

a voice client converting between wireless data used by said transceiver and Internet protocol data used by said interface (*see col.3 line 59 – col.4 line 4*).

j) **In Regarding to Claim 23: Gorman further disclosed** the wireless local site network of claim 22, wherein said voice client adds Internet protocol overhead to data received from said mobile terminal and to be sent from said wireless local site network to said cyber base station (*see col.3 line 66 – col.4 line 4*), and removes internet protocol overhead from data received from said cyber base station (*see Fig.3 and col.5 lines 64-67*).

k) **In Regarding to Claim 24: Gorman disclosed** a method of handing off a mobile terminal from a first traffic channel with a first cell to a second traffic channel of a second cell during a call (*see Fig.6*), wherein one of said cells communicates via a high power wireless base station (*see Fig.6: 603 and 602*) and the other of said cells communicates via a low power wireless local site network and an Internet (*see Fig.6: 605 and 610*), comprising:

determining whether to execute a handoff from said first cell to said second cell (*see col.9 lines 38-56*);

creating said second traffic channel when it is determined to execute a handoff (*see col.9 line 57 – col.10 line 16*); and

when said second traffic channel is created, moving said call to said second traffic channel and terminating said first traffic channel (*see Fig.7: step 726 Release*);

wherein one of said first and second traffic channels is an Internet traffic channel for communicating via the Internet using Internet protocol and the other of said first and second traffic channels is a radio channel for communicating via said high power wireless base station (*see Fig.4: 418; col.9 lines 65-66; and Fig.7: 601, 604 and 603*).

l) **In Regarding to Claim 25:** Gorman further disclosed the method of claim 24, wherein said one traffic channel routes data to an internet protocol address (*see col.8 lines 50-55*).

m) **In Regarding to Claim 26:** Gorman further disclosed the method of claim 24, wherein said first traffic channel is said internet traffic channel (*see Fig.6: 608, 605 and 610*) and said second traffic channel is said radio channel (*see col.4 lines 28-35; and Fig.7: 708, 703 and 702*)

n) **In Regarding to Claim 27:** Gorman further disclosed method of claim 24, wherein said first traffic channel is said radio channel (*see Fig.7: 708, 703 and 702*) and said second traffic channel is said Internet traffic channel (*see Fig.7: 708, 705 and 710*).

o) **In Regarding to Claim 28:** Gorman further disclosed the method of claim 24, wherein:

said first and second traffic channels communicate with first and second base stations respectively (*see Fig.7: 703 and 710*) and said first and second base stations communicate with a mobile switching center (*see Fig.7: MSC, BS and ISH; wherein the MSC communicates directly to the BS and communicates with the ISH via the 718 and 712*); and

said mobile switching center determines whether to execute a handoff and instructs said first and second base stations when to create said second traffic channel and terminate said first traffic channel (*see Fig.6: 614; Fig.7: 716; col.10 lines 9-16 and lines 44-47*).

p) **In Regarding to Claim 29:** Gorman disclosed all aspects of this claim as set forth in claims 24 and 28, but fails to explicitly disclose wherein data communicated by said first and second base stations include neighbor cell lists.

However, **Gorman** inherently Gorman discloses such neighbor cell lists of the instant claim because Gorman discloses hand-off processes between a service manager (*cyber base station*) and a MSC as shown in Figs.6 and 7, wherein it is inherently such a service manager having a list of pico cells such as cells 605 and 705 shown in Figs. 6 and 7, and cell 102 as shown in Fig.1.

q) **In Regarding to Claim 30: Gorman further disclosed** the method of claim 24, wherein said determining whether to execute a handoff from said first cell to said second cell is based on reported strengths of the signals received from said first and second cells (*see col.5 lines 24-33*), wherein the reported signal strength with said other of said cells communicating via a low power wireless local site network is greater than the actual strength of the received signal (*col.9 lines 14-22 and lines 40-43*).

Claim Rejections - 35 USC § 103

7. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

8. **Claims 12-17, 19 and 21** are rejected under 35 U.S.C. 103(a) as being unpatentable over **Gorman et al.** (US Patent No. 6,711,417) in view of **Kil** (US Patent Application Publication No. US 2001/0046859 A1).

a) **In Regarding to Claim 12: Gorman disclosed** a wireless communication system, comprising:

a plurality of cells (*see Fig.1: 102 and col.3 lines 45-58*);

a plurality of low power wireless local site networks located in said cells (*see Fig.1: 100 and 108, and 111 and 113; herein the 100 and 108 are located inside the cell 102, and so do the 111 and 113, they would be located inside another cell 102*), said wireless local site networks served by a cyber base station via an internet and including a low power transceiver for communicating with mobile terminals (*see Fig.4: 400 (cyber base station), 418 (internet), 411 (wherein a low power transceiver is located inside the 411, see Fig.3: 318 and 306 and col.7 lines 49-55) and Fig.1: 100 and 113 (mobile terminals)*);

a mobile switching center controlling said cyber base station and said radio base stations (*see Fig.4: 412 and 400; col.1 lines 14-16; and Fig.6*).

Gorman disclosed one embodiment relating to the integrated service hub “ISH” which functions like a radio base station in a regular cellular system. Wherein the ISH provides a wireless coverage area, in which a user can employ a standard wireless telephone, such as a Sprint PCS telephone, to communicate with the ISH over an air interface. The ISH includes an antenna, an RF transceiver, vocoders, and other components to provide the ISH with the functionality of a CDMA base station controller. The ISH converts communications received from the wireless device into control and data signals having a format that is compatible for transmission on a broadband network (*see col.2 lines 23-33*). **However, Gorman fails to explicitly disclose** each cell of a plurality cells served by a radio base station via wireless signals.

Kil explicitly disclosed such an each cell of a plurality cells served by a radio base station via wireless signals (*see Fig.1: cell 14 and BTS (radio base station)*).

At the time of the invention, it would be obvious to a person of ordinary skill in the art to combine such an each cell of a plurality cells served by a radio base station via wireless signals, as taught by Kil with Gorman, so that a wireless communication can be provided via a radio base station to a mobile station located at a home network, wherein such a radio base station can be considered as a back-up station in a wireless communication network. The motivation for doing so would have been to provide reliability to a wireless communication network. Therefore, it would have been obvious to combine Kil with Gorman in the invention as specified in the claim.

b) In Regarding to Claim 13: Gorman further disclosed the wireless communication system of claim 12, wherein said cyber base station communicates information on a control channel (*see Fig.4: 400 (cyber base station) and 402 (control channel)*), and said control channel information includes Internet protocol addresses (*see col.8 lines 50-67*).

c) In Regarding to Claim 14: Gorman further disclosed the wireless communication system of claim 12, further comprising a voice client at each of said wireless local site networks, said voice clients converting data between wireless signals on said wireless local site network and internet protocol signals on the Internet (*see col.3 line 59 – col.4 line 4*).

d) In Regarding to Claim 15: Gorman further disclosed the local site communication system of claim 14, wherein said voice client at each of said wireless local site networks adds internet protocol overhead to data received from said mobile terminal and to be sent from said wireless local site network to said cyber base station (*see col.3 line 66 – col.4 line 4*), and removes internet protocol overhead from data received from said cyber base station (*see Fig.3 and col.5 lines 64-67*).

e) **In Regarding to Claim 16:** Gorman further disclosed the local site communication system of claim 12, wherein said cyber base station mimics said radio base stations to said mobile switching center (*see abstract and Fig.7: service manager (cyber base station) ISH (considered as a radio base station) and MSC (mobile switching center)*)).

f) **In Regarding to Claim 17:** Gorman further disclosed the wireless communication system of claim 12, wherein said cells each having a list of neighboring cells (*see Fig.6: cell 603, hence MSC would have a list of neighboring cells for detecting an appropriate cell to hand-off*), and said cyber base station is included in said list of neighboring cells for each of said cells within which said plurality of low power wireless local site networks is located (*see col.10 lines 11-13: the mobile has been detected by the service manager (hence cyber base station is included the list of neighboring pico-cells such as 605 in Fig.6)*)).

g) **In Regarding to Claim 19:** Gorman further disclosed the wireless communication system of claim 12, further comprising broadband connections between said wireless local site networks and the Internet (*see Fig.1: 108 (broadband) connected to packet network 110 (Internet)*)).

h) **In Regarding to Claim 21:** Gorman further disclosed the wireless communication system of claim 12, wherein said mobile switching center controls said cyber base station like a pico base station (*see Figs 4 and 6*)).

9. **Claims 7, 10, 18 and 20** are rejected under 35 U.S.C. 103(a) as being unpatentable over **Gorman et al.** (US Patent No. 6,711,417) in view of **Chen et al.** (US Patent Application Publication No. US 2001/0030950 A1) hereinafter referred to as Chen.

a) **In Regarding to Claims 7 and 18: Gorman disclosed** all aspects of these claims as set forth in claims 1 and 12, respectively.

Gorman failed to explicitly disclose wherein said wireless local site network is a Bluetooth and said local site communication system communicates with a mobile terminal having cellular and Bluetooth communication interfaces.

Chen explicitly disclosed such a wireless local site network is a Bluetooth and said local site communication system communicates with a mobile terminal having cellular and Bluetooth communication interfaces (*see Fig.3: 36*).

At the time of the invention, it would be obvious to a person of ordinary skill in the art to combine such an wireless local site network is a Bluetooth and said local site communication system communicates with a mobile terminal having cellular and Bluetooth communication interfaces, as taught by Chen with Gorman, so that a wireless communication can be provided in a short range radio frequency for simplifying communications among network devices in a wireless home communication network. The motivation for doing so would have been to simplify data synchronization and transmission between network devices in a wireless home communication network. Therefore, it would have been obvious to combine Chen with Gorman in the invention as specified in the claims.

b) **In Regarding to Claim 10 and Claim 20: Gorman disclosed** all aspects of these claims as set forth in claims 1 & 8 and claims 12 & 19, respectively.

Gorman failed to explicitly disclose wherein said broadband connections are cables.

Chen explicitly disclosed such broadband connections are cables (*see page 2 paragraph [0038]*).

At the time of the invention, it would be obvious to a person of ordinary skill in the art to combine such broadband connections are cables, as taught by Chen with Gorman in a purpose of a cable television access. The motivation for doing so would have been to provide complexity services such as telephone, Internet and cable TV to home users. Therefore, it would have been obvious to combine Chen with Gorman in the invention as specified in the claims.

Allowable Subject Matter

10. **Claim 11** is objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.
11. **Claims 31-33** would be allowable if rewritten or amended to overcome the rejection(s) under 35 U.S.C. 112, second paragraph, set forth in this Office action.
12. **Claims 34-37** are allowed.

Examiner Information

13. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Anthony T Ton whose telephone number is 703-305-8956. The examiner can normally be reached on M-F: 8:00 am - 4:30 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Douglas W Olms can be reached on 703-305-4703. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

ATT
7/25/04


Phirin Sam